

Remarks/Arguments:

The above Amendments and these Remarks are in reply to the Office Action mailed January 13, 2005.

The Examiner is thanked for the performance of a thorough search.

Claims 1 - 19 were pending in the Application prior to the outstanding Office Action. In the Office Action, the Examiner rejected claims 1-19. The present Response amends claim 18 to make explicit what was previously implicit and to correct minor informalities, and adds claim 20, leaving for the Examiner's present consideration claims 1 - 20. No new matter is added. Reconsideration of the rejections is requested.

Rejections under 35 U.S.C. § 102(b)

In items 2 - 10 on pages 2 - 5, the Office Action rejected claims 1, 4 - 11 and 13 - 15 under 35 U.S.C. 102(b) as being unpatentable over U.S. Patent No. 5,991,792 to Nageswaran ("Nageswaran"). The rejections are respectfully traversed.

Claim 1

The office actions arguments regarding claim 1 ignore recited claim limitations. Nageswaran fails to render the embodiment of amended claim 1 unpatentable at least for failing to teach, suggest or otherwise render obvious "reducing resources in an unavailable deque; and reducing resources in an available deque" recited by claim 1. Applicant's claimed embodiments contemplate a separate (de)que for unavailable resources. As noted in Applicant's specification, "UNAVAILABLE [deque] will contain resource instances that were previously not created successfully or able to be refreshed," (Specification, paragraph [0019]).

Not only does Nageswaran's approach fail to teach such recited claim limitation, Nageswaran actually teaches away. Nageswaran instead teaches use of a single idle thread queue 140 to manage execution threads in a uniform thread pool 136 of a computer operating system (Nageswaran, Abstract; FIG. 1B; col.2:lines 42 - 44). Unlike Applicant's recited "unavailable deque; and ... available deque," Nageswaran's thread pool does not provide benefits of separate

management according to characteristics of associated computing resources, i.e., whether resources are available or unavailable, for example. Nageswaran's execution threads, in contrast to the recited computing resources, are available if in existence, and thus may be managed by Nageswaran's conventional uniform thread pool approach.

Nageswaran's use of a single uniform resource pool to manage execution threads teaches away from the recited "unavailable deque; and ... available deque" as to Nageswaran's purpose as well as Nageswaran's implementation because Nageswaran indicates that they necessarily rely on the execution threads in the thread pool being fungible, i.e., since each is available, any one can be removed from the pool if not in use: "[t]hreads 138 that are not dedicated for any particular transaction are prime candidates to be released and thread manager 132 would identify these threads and mark their state as "Being Removed") (Nageswaran, col. 3:lines 54 – 67 and col. 4: lines 1 – 18). Accordingly, not only do Nageswaran's execution thread pool management techniques fail to teach, suggest or otherwise render obvious the recited "unavailable deque; and ... available deque," Nageswaran's approach actually teaches away. Further, any argued addition of the recited mechanism for managing unavailable resources separately from available resources would render Nageswaran inoperable or change Nageswaran's principle of operation (see MPEP § 2143.01) since Nageswaran is relying on execution threads in the resource pool as always being available.

In sum, Nageswaran fails to teach, suggest or otherwise render obvious the embodiments recited by claim 1.

Claim 11

Nageswaran fails to render the embodiment of amended claim 11 unpatentable at least for failing to teach, suggest or otherwise render obvious "performing a test on pool resources; and refreshing pool resources based on the pool resources testing" recited by claim 11. As noted in Applicant's specification, "Resources are tested at step 320. In one embodiment, the resource test *determines if the resource is functioning properly*," (Specification, paragraph [0024], emphasis added). Nageswaran's approach not only fails to disclose such claim limitation,

Nageswaran actually teaches away by disclosing removal of execution threads from the resource pool if the threads become idle, “[t]hreads 138 that are not dedicated for any particular transaction are prime candidates to be released and thread manager 132 would identify these threads and mark their state as “Being Removed” (Nageswaran, col. 3:lines 54 – 67 and col. 4: lines 1 – 18). Further, any argued addition of the recited mechanism for testing and/or refreshing resources to Nageswaran’s approach would render Nageswaran inoperable or change Nageswaran’s principle of operation (see MPEP § 2143.01) because Nageswaran presently REMOVES idle threads from the thread pool – nothing of the thread is left to be refreshed.

Claim 14

Claim 14 also recites limitations that are neither taught, suggested or otherwise rendered obvious by Nageswaran, at least by reciting a reserved deque and unavailable deque: “performing maintenance on the unavailable deque; and performing maintenance on the reserved deque.” Because Nageswaran’s approach is to remove idle threads from a thread pool based upon a single idle thread queue, Nageswaran’s approach teaches away and would be rendered inoperable if coupled with such recited claim limitation of “performing maintenance on the unavailable deque; and performing maintenance on the reserved deque.”

Rejections under 35 U.S.C. § 103(a)

Claims 2 – 3 and 12

In items 13 - 15, on pages 6 – 7, Claims 2 - 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nageswaran, in view of published U.S. Patent Application No. U.S. 2004/0045008 A1 to June et al (“June”). Applicant respectfully traverses.

Nageswaran’s failures to teach, suggest or otherwise render obvious the embodiments recited by claims 1 and 11 were discussed previously. Since claims 2 – 3 and 12 depend from

claims 1 and 11 respectfully, either directly or indirectly, Nageswaran cannot render the embodiments of claims 2 – 3 and 12 unpatentable if Nageswaran fails to teach, suggest or otherwise render obvious the embodiments recited by claims 1 and 11.

June's connector architecture fails to remedy the shortcomings of Nageswaran in failing to teach, suggest or otherwise render obvious the embodiments recited by claims 1 and 11, even if such a combination of June and Nageswaran were even possible. In particular, June's connector architecture fails to remedy Nageswaran's flaws in failing to teach, suggest or otherwise render obvious the "unavailable deque; and ... available deque," recited by claim 1 and "performing a test on pool resources; and refreshing pool resources based on the pool resources testing" recited by claim 11. June also teaches away from these recited claim limitations by describing instead a single connection pool: "[t]he period of time is associated with a single connection pool associated with the resource adapter" (June, [0032]).

Since claims 2 – 3 and 12 depend from claims 1 and 11 respectfully, either directly or indirectly, the asserted combination of June with Nageswaran, even if possible, could not render the embodiments of claims 2 – 3 and 12 unpatentable because the combination of June and Nageswaran does not render the embodiments recited by claims 1 and 11 unpatentable.

Claims 16 – 19

In items 16 - 19, on pages 7 – 8, Claims 16 - 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nageswaran, in view of U.S. Patent No. 6,182,109 to Sharma et al ("Sharma"). Applicant respectfully traverses.

Since claims 16 – 17 depend from claim 14, either directly or indirectly, Nageswaran cannot render the embodiments of claims 16 – 17 unpatentable if Nageswaran fails to teach, suggest or otherwise render obvious the embodiments recited by claim 14. Nageswaran's failure to teach, suggest or otherwise render obvious the embodiments recited by claim 14 was discussed previously.

Applicants respectfully submit that the Office Action's asserted combination with Sharma, even if such a combination were even possible, fails to remedy the shortcomings of

Nageswaran in failing to teach, suggest or otherwise render obvious the embodiments recited by claims 14 at least regarding claim 14 reciting, “performing maintenance on the unavailable deque; and performing maintenance on the reserved deque.” Sharma’s execution thread manager instead populates a single pool of execution threads. (Sharma, Abstract). Unlike Applicant’s recited “connection pool deque,” Sharma’s execution threads are not placed on various dequeues. Accordingly, not only do Sharma’s execution thread pool techniques fail to teach, suggest or otherwise render obvious the recited “performing maintenance on the unavailable deque; and performing maintenance on the reserved deque,” Sharma’s techniques teach away by teaching instead the preallocation of execution threads in a single common pool. Further, Sharma appears to address an entirely different problem. Sharma states their system reduces latency arising during switching between execution threads in a server [col. 21:lines 30 - 40], which is an entirely different problem than the “performing maintenance on connection pool deque in an application server” recited in the preamble of claim 14. Accordingly, Sharma teaches away as to its purpose, as well as its operation.

Since claims 16 - 17 depend from claim 14, either directly or indirectly, the asserted combination of Sharma with Nageswaran, even if possible, could not render the embodiments of claims 16 - 17 unpatentable because the combination of Sharma and Nageswaran does not render the embodiments recited by claim 14 unpatentable.

Claims 18 - 19

Amended claim 18 is patentable over the asserted combination of Nageswaran and Sharma at least for reciting “moving the resource to an available deque if generation of the resource is confirmed, otherwise moving the resource to an unavailable deque,” which is not taught, suggested or otherwise rendered obvious by that asserted combination at least for the reasons discussed above with respect to claims 1, 11 and 14. Therefore, for at least these reasons, the Applicant respectfully submits that claim 18 is allowable over the art of record and is in condition for allowance. Since claim 19 depends from claim 18, the asserted combination of

Nageswaran and Sharma cannot render the embodiments of claim 19 unpatentable if the asserted combination fails to render the embodiments recited by claim 18 unpatentable.

Claims 4 - 10, 13 and 15

Claims 4 - 10, 13 and 15 are dependent upon Claims 1, 11 and 14 respectively, and thus include each and every feature of the corresponding independent claims. Each of Claims 4 - 10, 13 and 15 is therefore allowable for the reasons given above for the Claims 1, 11 and 14. In addition, each of Claims 4 - 10, 13 and 15 introduces one or more additional limitations that independently render it patentable. Therefore, it is respectfully submitted that Claims 4 - 10, 13 and 15 are allowable for the reasons given above with respect to Claims 1, 11 and 14.

Conclusion

In sum, Nageswaran, alone or in any combination with either or both of June and Sharma, fails to consider recited claim limitations; would be rendered inoperable for its intended purpose or require changes to its principles of operation; and teaches away from the embodiments recited by claims 1 - 19 as to its structure as well as its purpose.

The references cited by the Examiner but not relied upon have been reviewed, but are not believed to render the claims unpatentable, either singly or in combination.

In light of the above, it is respectfully submitted that further examination of the elected claims continue. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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